

## REMARKS

Re-examination and allowance of the present application is respectfully requested.

Initially, Applicants thank the Examiner for acknowledging the claim for foreign priority, and for indicating that the certified copy of the priority document has been received. Applicants further thank the Examiner for confirming the acceptability of the filed drawings, and for returning completed copies of the PTO-1449 Forms that accompanied the Information Disclosure Statements filed on January 10, 2006 and May 17, 2004, thus confirming consideration of the submitted materials.

In this regard, Applicants note that the Information Disclosure Statement filed on May 17, 2004 cited several co-pending applications. Applicants herewith update the status of the previously cited co-pending applications, and list the updated status on a PTO-1449 Form. The Examiner is respectfully requested to return a completed copy of the PTO-1449 Form with the next official communication in order to confirm consideration of the materials. Further, Applicants submit that no fee is required to be paid with this submission, as the documents listed therein are merely an updating of documents originally cited in the May 17, 2004 Information Disclosure Statement.

Applicants respectfully traverse the 35 U.S.C. §102(e) rejection of claims 1-8 as being obvious over U.S. Patent Application Publication No. US 2003-0108191 to KERPEZ.

According to a disclosed embodiment of the present invention (using claim 1 as an example), an ADSL modem apparatus includes an exchange unit and an estimation unit. A REVERB signal is part of an ADSL modem training signal. The REVERB

signal is transmitted in accordance with either ITU-T standard G.992.1 or ITU-T standard G.992.2. The exchange unit transmits and receives the REVERB signal. The estimation unit estimates a communication distance to an opposing ADSL modem apparatus based upon a reception level of the REVERB signal. Thus, the present invention estimates a communication distance between two modems based upon a level of the REVERB signal. Consequently, the present invention dispenses with the need to use a further signal that is specifically intended to determine a communication distance between two modems. Applicants submit that at least this feature is not disclosed, let alone suggested, by KERPEZ.

Applicants submit that KERPEZ is directed to maximizing a data transmission rate using flat power back-off (PBO) to minimize power for specific modems over a communication line, along with notched frequency spectrum that excludes specific frequencies from transmission. However, Applicants submit that KERPEZ is silent with respect to the use of a REVERB signal to estimate a communication distance with an opposing ADSL modem.

Thus, Applicants submit that KERPEZ only discloses the use of flat power back-off and notched frequency spectrum to maximize a data transmission rate, and is not concerned with estimating a communication distance.

In this regard, the Examiner asserts in the Office Action that paragraph [0037] of KERPEZ discloses an estimation unit to estimate a communication distance. Applicants submit that paragraph [0037]] of KERPEZ only discusses novel spectral compatibility methods that can be used alone or in combination with a power back-off method that identifies a first lower notch frequency and a second upper notch frequency, in between

which intermediate frequencies are not used for transmitting data downstream from a remote terminal ADSL modem. Applicants submit that this is totally different from (and unrelated to) Applicants' invention of estimating a communication distance based upon a level of a REVERB signal.

Applicants note that paragraphs [0057] and [0058] of KERPEZ discusses receiving data indicative of a distance from a central office using a broadband test head (BBTH) and/or using a database that stores topology or by extracting data from the DSL modems or Digital Subscriber Line Multiplexers (DSLAMS). However, Applicants submit that KERPEZ is silent with respect to using a REVERB signal (which is part of an ADSL modem training) to estimate a communication distance to an opposing ADSL modem apparatus, as specified in Applicants' independent claims 1 and 7.

In view of the above, Applicants submit that KERPEZ fails to disclose (or even suggest) each and every feature of Applicants' claimed invention, such as, for example, estimating a communication distance to an opposing ADSL modem apparatus in accordance with a level of a REVERB signal. Accordingly, Applicants submit that the presently claimed invention is not anticipated by KERPEZ. Thus, Applicants respectfully request withdrawal of the 35 U.S.C. §102(e) rejection of claims 1-8, along with an indication of the allowability of claims 1-8.

Applicants also submit new claims 9-11 for the Examiner's consideration. Applicants submit that claims 9-11 are allowable for at least the same reasons applicable to claims 1-8; namely, that the applied art fails to disclose or suggest using a REVERB signal to estimate a communication distance. Accordingly, Applicants respectfully request the Examiner to indicate the allowability of newly submitted claims 9-11.

SUMMARY AND CONCLUSION

In view of the fact that none of the art of record, whether considered alone or in combination, discloses or suggests the present invention as now defined by the pending claims, and in further view of the above amendments and remarks, reconsideration of the Examiner's action and allowance of the present application are respectfully requested and are believed to be appropriate.

Should the Commissioner determine that an extension of time is required in order to render this response timely and/or complete, a formal request for an extension of time, under 37 C.F.R. §1.136(a), is herewith made in an amount equal to the time period required to render this response timely and/or complete. The Commissioner is authorized to charge any required extension of time fee under 37 C.F.R. §1.17 to Deposit Account No. 19-0089.

If there should be any questions concerning this application, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully Submitted,  
Nobuhiko NOMA et al.

A handwritten signature in black ink, appearing to read 'Bruce H. Bernstein', with a long horizontal flourish extending to the right.

Bruce H. Bernstein  
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